CIVIL TECH LABS

Accredited by NABL as per ISO/ IEC 17025 : 2005

5, 1st Cross, Srinivasa Colony, Mission Road, Bangalore - 560027

Ph: 080 - 4114 2867 / Mob. : 96862 31801, Email: civiltechlabs@gmail.com

T-2654

To,

Assistant Executive Engineer
Vidyaranyapura Sub Division,
BBMP.

AEE

28th May 2015

Dear Sir,

Sub: Testing of Bituminous Concrete.

As requested, the required tests were carried out for the Bituminous Concrete samples supplied by you, for the work of **'Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division'.**

Please find the enclosed Test Report of the above.

Thanking You,
For Civil Tech Labs

(KHUSHBOO L.)
Quality Manager

CIVIL TECH LABS BANGALORE

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TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-1		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirements**
13.2	79-100	**97.4**	
9.5	70-88	**84.6**	
4.75	53-71	**62.3**	
2.36	42-58	**47.5**	
1.18	34-48	**38.5**	
0.6	26-38	**32.6**	
0.3	18-28	**20.5**	
0.15	12-20	**18.4**	
0.075	4-10	**6.8**	

Note:

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3. Any correction invalidates this report.
4. The results are based on the test conducted on samples supplied by the customer.

Lab Incharge
Civil Tech Labs

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TEST REPORT

GRADATION TEST ON BITUMINOUS CONCRETE MIX GRADE - 2

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015
Technical Reference	IS : 2386(Part I)–1963 (Reaffirmed 2011)

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve as per MORTH (4th Revision) Table 500-18 for BC Grade-2**	**Actual % By Weight Passing IS Sieve**	**Remarks**
19	100	**100**	**Satisfies the requirements**
13.2	79-100	**98.3**	
9.5	70-88	**85.6**	
4.75	53-71	**63.5**	
2.36	42-58	**48.2**	
1.18	34-48	**37.4**	
0.6	26-38	**31.5**	
0.3	18-28	**21.4**	
0.15	12-20	**17.4**	
0.075	4-10	**7.2**	

Note:

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TEST REPORT

TEST ON DETERMINATION OF BITUMEN CONTENT ON BITUMINOUS CONCRETE MIX-GRADE 2

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015

A)

Sl. No.	Test	Test Method	Technical Reference
1	Extraction of mineral aggregate	**Test Method A (Centrifuge Method)**	**ASTM: D2172/ D2172M-11**
2	Determination of amount of mineral matter/fines in the extract	**Ashing Method**	

B)

Specification: As Per MORTH (4th Revision) Table 500-18, Bitumen Content for BC Grade-2 is 5% to 7%

Sl. No.	Description	Values
1	Weight of bituminous mixture before extraction test, **W_1 g**	**2000.00**
2	Weight of mineral aggregate obtained from centrifuge extractor, **W_2 g**	**1874.52**
3	Weight of mineral matter in the total volume of extract (by ashing), **W_3 g**	**13.42**
4	Total weight of aggregate in the bituminous mixture, **W_4 g = (W_2 +W_3) g**	**1887.94**
5	Total weight of Bitumen extracted from the mixture, **W_5 g = (W_1-W_4) g**	**112.06**
6	Bitumen content in %, **(W_5/W_1) %**	**5.60**

Remarks	**Satisfies the requirement.**

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T-2654

To,

Assistant Executive Engineer
Vidyaranyapura Sub Division,
BBMP.

20th May 2015

Dear Sir,

Sub: Testing of Wet Mix Macadam.

As requested, the required tests were carried out for Wet Mix Macadam samples supplied by you, for the work of **'Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division'.**

Please find the enclosed Test Report of the above.

Thanking You,
For Civil Tech Labs

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(KHUSHBOO L.)
Quality Manager

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TEST REPORT

TEST ON WMM MIX

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11, (Kuvempunagara) Vidyaranyapura Sub Division.
Name of the Agency	M/s. K. R. I. D. L.
Date of Testing	20/05/2015
Reference	MORTH Table 400-11

IS Sieve Designation (mm)	% By Weight Passing IS Sieve	Actual % By Weight Passing IS Sieve	Remarks
53	100	100	**Satisfies Requirements**
45	95-100	98.9	
22.4	60-80	72.1	
11.2	40-60	53.8	
4.75	25-40	34.9	
2.36	15-30	22.7	
0.6	8-22	15.6	
0.075	0-8	6.1	

Note:

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TEST REPORT

STRIPPING TEST OF ROAD AGGREGATES

Bituminous Concrete

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11 (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015

Method of Test	Observation No.	Uncovered Area/Stripping in %	Average Stripping Value in %	As Per Morth Table 500-17	Remarks
IS 6241-1971 (Reafirmed 2003))	1	3.6	3.6	**5 % Maximum**	Satisfactory
	2	3.3			
	3	3.8			

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TEST REPORT

WATER ABSORPTION TEST OF ROAD AGGREGATES

Bituminous Concrete (BC)

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11 (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015

Method of Test	Sample No.	Water Absorption in %	Average Water Absorption in %	As per MORTH Table 500-17	Remarks
IS : 2386 (Part 3)	1	0.86	0.85	**2 % Maximum**	Satisfactory
	2	0.88			
	3	0.81			

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TEST REPORT

TEST ON AGGREGATES ('AIV' & Combined Flakiness & Elongation Index)

Bituminous Concrete

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11 (Kuvempunagara) Vidyaranyapura Sub Division.
Name of Agency	M/s. K. R. I. D. L.
Date of Testing	28/05/2015
Reference	**MORTH Table 500-17**

Sl. No	Aggregate Impact Value 'AIV' in %	Average AIV in %	Remarks
1	22.6	22.0	Satisfactory (As per MORTH for BC, Maximum allowed AIV is 24 %)
2	21.3		

Test	Result in %	Combined Flekiness & Elongation Index 'C-F&E' in %	Remarks
Flakiness Index	11.3	24.8	Satisfactory (As per MORTH for BC, Maximum allowed 'C-F&E' is 30 %)
Elongation Index	13.5		

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TEST REPORT

GRADATION TEST ON WET MIX MACADAM

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11 (Kuvempunagara) Vidyaranyapura Sub Division.
Name of the Agency	M/s. K. R. I. D. L.
Date of Testing	20/05/2015
Technical Reference	MORTH Table 400-11

	Sample-2		
IS Sieve Designation (mm)	**% By Weight Passing IS Sieve**	**Actual % By Weight Passing IS Sieve**	**Remarks**
53	100	**100**	**Satisfy the Requirements**
45	95-100	**97.4**	
22.4	60-80	**75.4**	
11.2	40-60	**46.8**	
4.75	25-40	**32.5**	
2.36	15-30	**26.3**	
0.6	8-22	**16.8**	
0.075	0-8	**7.1**	

Note:

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TEST REPORT

TEST ON AGGREGATES ('AIV' & Combined Flakiness & Elongation Index)

Wet Mix Macadam

Name & Address of the Customer	AEE, Vidyaranyapura Sub Division, BBMP.
Name of Work	Improvements to Main road and cross roads at Devappa Layout in ward no. 11 (Kuvempunagara) Vidyaranyapura Sub Division.
Agency of the Name	M/s. K. R. I. D. L.
Date of Testing	20/05/2015
Reference	**MORTH Table 400-10**

Sample No	Aggregate Impact Value 'AIV' in %	Average AIV in %	Remarks
1	22.6	22.1	Satisfactory (As per MORTH for WMM, Maximum allowed AIV is 30 %)
2	21.5		

Test	Result in %	Combined Flakiness & Elongation Index 'C-F&E' in %	Remarks
Flakiness Index	11.5	25.0	Satisfactory (As per MORTH for WMM, Maximum allowed 'C-F&E' is 30 %)
Elongation Index	13.5		

Note:

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